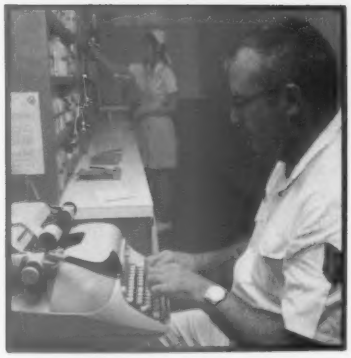

A Newer, Better Air Force Medical Service Through Automation

Spring 1992
Vol. 43, No. 1

USAF Medical Service Digest

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Digest

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Distribution: one copy for every four military and civilian personnel in the Medical Service.

AFRP 160-1

Message from the Surgeon General 3

CHCS Under Testing at Eglin 4
Capt. Fred W. Peters, MSC
Maj. Susan E. Peters, NC

On Location: Altus AFB 7
Lt. Col. Ronald E. Wildman, MSC
Maj. Stephen T. McDavid, MC

Saving Lives Through Bone Marrow Transplantation 11
Ms. Cynthia T. Jenks

Eglin Meets Home Health Care Needs 14
Maj. Valerie A. Cardona, NC

View from the Top: Lt. Gen. (Dr.) Alexander M. Sloan 19

Professional Board Certifications 22

Surgeon General's Office Welcomes New Director 23

Medical Service Awards 24

From the Editor

The Board and I would like to know what you think of the *Digest*. Do you find it useful, informative, interesting? We value your opinion, and we welcome your comments and suggestions. Please write to:

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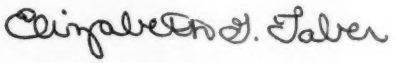

ELIZABETH G. TABER
Editor, *USAF Medical Service Digest*
Office of the Surgeon General

Front cover: Automation replaces old ways of doing business. (Top left) TSgt. David W. Roberts fills orders in Eglin's updated pharmacy. (Bottom right) Installation of the Medical Diagnostic Imaging Support system is slated to begin this summer in Wright-Patterson's radiology department.

Message from the Surgeon General

Automation: The Key to Efficient Patient Care

One of the challenges facing today's Air Force medicine is streamlining, improving the efficiency of our health care system. A key to increased efficiency is automation. Automation will allow us to stay on the "cutting edge" of advanced health care, and we must do all we can to seize its benefits. Automating medical equipment and clinical functions in our facilities will help us offer better service to our patients—our number-one concern. Through computer networks and stand-alone stations, we can gain better control of time, information and quality, increasing our productivity.

Right now, various computer systems are being tested in our medical centers around the country to determine what will meet our needs. Clinical laboratories are an area of major concern. Laboratory automation would reduce clerical errors, decrease turnaround time, improve workload recording. Only 17 of our 120 clinical laboratories are using clinical laboratory information systems such as the Composite Health Care System (CHCS), Biovation, TRILAB and MedCom.

A decision will be made soon about the success and future of CHCS, currently under evaluation at 12 DOD sites. It has appointment and scheduling functions, ancillary support functions and outpatient order entry/results retrieval functions. A new version promises added capabilities. For more information about CHCS, read the article in this issue of the *Digest* about Eglin AFB's experience as a test site.

The Tri-Service Microcomputer Pharmacy System supports clerical and clinical activities in inpatient/outpatient pharmacies. It produces standardized labels, maintains pharmacy inventory, rapidly retrieves clinical drug information and management reports, and identifies potential drug interactions and allergic reactions.

An off-the-shelf nursing information and patient care management system developed by SASHA Care International, the Nursing Automated System Test, automates four time-consuming nursing tasks: patient care documentation, patient classification, staff scheduling and nursing quality assurance. Results of this test will be used to quantify the benefits of automation in supporting nursing.

Although our test sites experience frustrations and hardware/software problems, their staff members would be the first to tell you that they prefer automation to doing things the old-fashioned way. They have rallied in the true spirit of the Medical Service and have made adjustments when necessary.

That same determination, present in each of you, will stand us in good stead in the coming years as we continue our research to find affordable alternatives and improvements in automation.

ALEXANDER M. SLOAN
Lieutenant General, USAF, MC
Surgeon General

Composite Health Care System

CHCS Under Testing at Eglin

Capt. Fred W. Peters, MSC
Maj. Susan E. Peters, NC

The AFSC Regional Hospital Eglin, Eglin AFB, Fla., has been testing the Composite Health Care System (CHCS) since 1988. We were selected as a test site after the Scientific Application International Corporation won a $1.01 billion, eight-year contract to develop CHCS. During this period of testing, our staff took their role seriously and put a lot of time and effort into working with the system. We have learned a great deal that we hope will benefit future users.

Overview of CHCS

CHCS automates the patient medical information system, linking various medical and administrative functions of a medical treatment facility (MTF). The automated system enhances quality health care delivery to all DOD medical beneficiaries by providing the following seven basic health care functions:

Patient Administration manages patients' admissions, transfers and dispositions from the inpatient facility by registering the patients in CHCS.

Patient Appointment and Scheduling is used to book appointments for patients based on criteria selected by the MTF, department and provider.

Clinical, or order entry, speeds up the ordering of activities such as lab tests, radiology requests and nursing activities, by connecting various departments in the MTF. The system allows the user to sign off particular orders or activities that were/were not accomplished and automatically transmits the results to the patient's file, the provider and the requesting unit.

Amn. Beverly Britt, an outpatient technician, uses CHCS to book appointments at the AFSC Regional Hospital Eglin, Eglin AFB, Fla.

Radiology helps with scheduling procedures and tracking patients from arrival to departure in the radiology department. Transcriptions and verification of radiology reports are filed and made available electronically to the requesting user. An ordering provider can quickly see duplicate procedure orders and contrast medium conflicts.

Pharmacy supports both outpatient and inpatient pharmacies. In the outpatient pharmacy, the provider may enter orders directly, or the order may be entered within the pharmacy from written prescriptions. Other inpatient functions include unit dose management, intravenous admixtures and unit stock maintenance.

Dietetics supports diet order entry and the production of diet rosters.

Laboratory processes information from all specimen analyzed in the laboratory. Many laboratory instruments can be interfaced with CHCS to eliminate the need of manually prepared work documents.

Preparation for CHCS

Before beginning the implementation of CHCS at Eglin, we asked our hospital staff, those who would be using the system, for help. They know more about the work they do than anyone else, and they know best how they can accomplish that work (1). We wanted to customize the system to meet their needs as much as possible. We involved them by creating three major working groups under the direction of the Executive Committee. These groups helped make recommendations and solve problems. After the groups were in place, we started planning.

The first important planning decision, which involved input from other major Air Force and DOD organizations, was deciding which departments should

begin using CHCS. Key factors in making this decision were each department's current computer system capabilities and the department's impact on other departments. We also considered which departments would be able to get the system activated most efficiently, and we determined available resources for training support. Our second crucial decision was settling on a training approach.

Computer training is a powerful determinant of successful system implementation (2). Although computer training can cause anxiety in some who may fear looking incompetent (3), it can also allay most worries about using computers. Training can help resolve fears in those who feel threatened by a change in the status quo and in those who feel that working with a computer is too impersonal.

At Eglin, we established a solid training program early to get our staff acclimated and to ensure proper training of newcomers; preparing for newcomers is vital since the military has a 20-25 percent staff turnover every year. To help with our training program, we selected experts among each of the functional areas who could offer assistance to their fellow staff members. Our training programs are so successful that we trained more than 200 Guard and Reserve members assigned to our MTF during Operation Desert Storm.

Using CHCS in the Pharmacy

After completing our major decision-making and initial training, we began using CHCS functions in August 1988. The CHCS pharmacy function was put into action first. Once the pharmacy converted, providers in the family practice, internal medicine and primary care clinics were introduced to the outpatient clinical, or order entry, function.

Since our pharmacy began using the system to fill prescriptions, prescription processing time has decreased significantly. The average patient waiting time is approximately one minute for orders entered directly by the provider. By the time the patient leaves the provider's office and arrives at the pharmacy window, they have a 65 percent chance of receiving their medication with no wait. If they have to wait, there is an 85 percent chance that they will wait less than three minutes. However, if a patient brings a written prescription to the pharmacy, the average waiting time is 18 minutes. The combined average waiting time at Eglin is 3.9 minutes.

We think our pharmacy program is exceptional considering that we fill more than 1 million prescriptions a year. Once the provider electronically orders the prescription, the pharmacy automatically receives a label for the bottle. At the same time, CHCS connects with the Baker Cell (tablet and capsule dispenser) which electronically counts out the number of tablets/capsules ordered. The pharmacy technician

Sgt. Patrick Leroux enters prescriptions into CHCS. Average waiting time at Eglin's pharmacy is now 3.9 minutes.

then marries the label, bottle and pills to complete the transaction. The system is approved by the Drug Enforcement Agency for electronic signature by health care providers.

Using CHCS for Appointments

In the fall of 1988, we began implementing CHCS's patient appointment and scheduling function, using a clinic-by-clinic approach. Because this activity allows rapid booking of appointments, it enhanced our whole appointment system and ultimately decreased our "no-show" rate. When using the system, if appointments are not available, patients can be added to an electronic waiting list. This helps keep the schedules filled.

To discourage "no-shows," the system generates automatic mailers sent to the patients' homes 14 days before their appointment. At Eglin, we take the function a step further by adding an electronic phone calling system that automatically calls patients at home two days before their visits. Also, if active duty members are chronic "no-shows," the system can generate a letter to their commander.

Using CHCS in Radiology

In the spring of 1989, we started to use the radiology support offered by CHCS. CHCS allows radiologists to dictate reports and transmit them to a patient file. After the report is verified, the system automatically sends a copy to the requesting provider and the radiology file room. Copies also go to either outpatient records or the nursing unit, depending on the patient's status.

With Voice-RADiology, the radiologist can dictate to a computer screen, then print and file the report, bypassing the transcriber. Also, using a bar coding system, the radiology department can keep track of all films by checking them out to a clinic or ward. This greatly improves record tracking capability.

CHCS handles lab transactions within Eglin's facility. Amn. John Desjarlais (foreground) enters lab orders.

Using CHCS for Order Entry

As mentioned earlier, the outpatient order entry function, part of CHCS's clinical support, was activated in our family practice, internal medicine and primary care clinics when our pharmacy began using CHCS to fill prescriptions. The rest of our outpatient clinics began using the outpatient order entry function in December 1989.

This order entry function is used by the provider to order tests and retrieve information as needed. Less time is spent searching for results and reports when the information is filed in CHCS. To alert the provider when ordering, the system has a variety of warnings for such things as drug interaction, drug duplication and known allergies. Once providers order lab tests, X-rays, consults and prescriptions, the system generates a claim check for the patient to present to each ancillary service.

Our mental health nursing unit served as a test unit for the inpatient clinical function. We decided to begin with one unit and allow project managers to identify and solve problems, making further implementation easier. This function allows nursing staff to request and result various patient care activities. After implementing it in four units, we found that the inpatient function was too time-consuming for physicians. In May 1990, we reduced the use of the inpatient functions. New versions of the CHCS software, currently under revision, will allow the providers to use the inpatient function with less clerical effort.

Using CHCS in the Laboratory

In January 1990, the laboratory was the last ancillary service activated at Eglin. Transactions to the lab from within the facility are now handled by CHCS, making lab slips a thing of the past. Inpatient appointments are made for collection through the system. CHCS creates work documents for transfer of data from interfaced analyzers. Most data can be transferred automatically; however, some must be keyed in because not all equipment is compatible with CHCS.

Patient Administration and Extra Benefits

With CHCS at Eglin, we can store large amounts of information about our patient population. The patient administration module allows all patients to be registered. The registration information includes next of kin, employment information and other personal data. This information is readily available for the provider should the need arise. For inpatients, this function tracks the ward location, room and bed number of all patients. By keeping track of the patients' locations, we can distribute vital reports from the ancillary services to the proper locations as soon as possible.

Two other benefits of CHCS are Electronic Mail (E-Mail) and Ad Hoc capability. E-Mail opens communication to satellite clinics, or anyone hard to reach by telephone, and makes in-house communication easier. The Ad Hoc capability allows a user to search the database for virtually any information and keeps track of special entities, such as firstborn, child abuse or emergency room visits. These two features are a real bonus to the CHCS system.

Conclusion

Although CHCS is still not a perfect system, we have found that with work-arounds and some creative thinking we can make it work for us. Our users would be the first to admit that CHCS is not infallible, but that it certainly beats what we had. We believe that CHCS has the potential to help increase productivity, and we would like to see it grow. In the spring of 1992, DOD will decide whether the software is acceptable for deployment to other DOD medical facilities, and we at Eglin have been proud to be a part of this new endeavor to improve the quality of patient care.

Capt. Fred W. Peters is the director of information systems at the AFSC Regional Hospital Eglin, Eglin AFB, Fla., and Maj. Susan E. Peters is the nurse internship coordinator at the same facility.

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Featuring

Altus AFB

Lt. Col. Ronald E. Wildman, MSC
Maj. Stephen T. McDavid, MC

The land drops from the high plains of the Northwest and sweeps down without reserve, marked only by a steady wind, sandstone outcroppings, meandering rivers and horizons of granite. The bluestem and Indian grass of the prairie merge with the buffalo grass of the plain. Tributaries of the Washita and the Red Rivers bring cool, green shade to the crisp brown of summer. As the prairie plain fans south and west, it levels, and the Wichita Mountains suddenly rush skyward. Then the land is level again, semi-arid, spiced with mesquite trees and prickly pear cactus, stretching out seemingly forever. This is Southwest Oklahoma, home to Altus AFB.

A Look Back

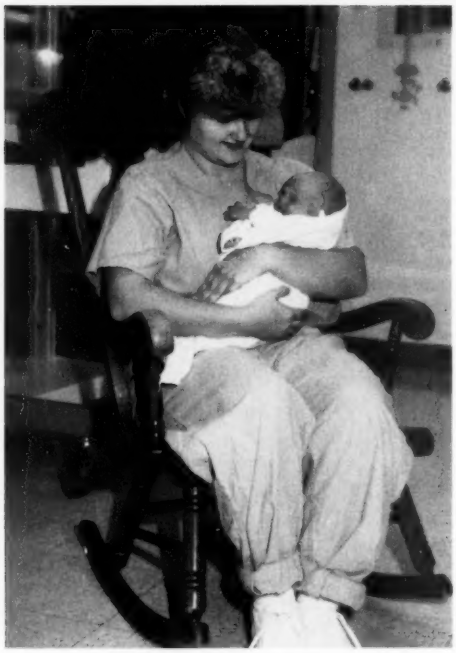
Founded in 1886, the town of Altus was originally named Frazier, and the settlement was located 2.5 miles west of the present site of the city. In 1891, Frazier was flooded and almost washed away. The citizens moved their few remaining belongings, including some buildings, started again at the present site, and changed the name to Altus, which means *altitude* or *high place*.

Early pioneers worked the country that was previously inhabited by Indians and cattle from the old Cross S Ranch. They found life hard, tilling a land that constantly fought back, living in sod half-dugouts due to a lack of timber and fighting alternating drought and flash floods. Despite the severe climate, they persevered and Altus grew. Today, Altus is recognized as a growth center with unlimited potential.

The base first opened for military use in 1942, serving as an advanced flight training school during World War II. It was deactivated in 1945 after the end of the European phase of the war and served as the Altus Municipal Airport. On Jan. 7, 1953, the base was reactivated, and the 63rd Troop Carrier Wing, under Tactical Air Command, took over housekeeping responsibilities.

The Strategic Air Command (SAC) assumed jurisdiction on Oct. 15, 1953, and the following month, the 96th Bomb Wing was activated at Altus. The 11th Bombardment Wing, now the 11th Air

Lt. Col. (Dr.) Laxmichand K. Daryanani (left), chief flight surgeon of the 443rd Medical Group, Altus AFB, Okla., treats a pilot in Altus' modern, well-staffed medical facility.



Medical technician SrA. Kimberly J. Shirley cradles a recent arrival in the newborn nursery at Altus.

Refueling Squadron, was assigned to Altus in September 1957 to replace the 96th Bomb Wing. The 11th began operating the base in December of the same year.

On July 1, 1958, headquarters of the 816th Air Division under SAC was activated at Altus and controlled the base until July 1965 when the 11th took over again. In November 1961, the 577th Strategic Missile Squadron was activated and operated 12 Atlas ICBM sites around the base. The 577th was deactivated in April 1965 when the Atlas missile was phased out.

The Military Airlift Command (MAC) took operational control of the base July 1, 1968, and preparations began for the 443rd Military Airlift Wing's move to Altus from Tinker AFB near Oklahoma City. The 443rd Military Airlift Wing, now redesignated the 443rd Airlift Wing (AW), serves as the host wing for the 340th Air Refueling Wing.

A Look Around

Few cities are as generously endowed as Altus, with its advantageous geographic location, moderate climate, excellent transportation facilities, and educational and cultural outlets. More importantly, though, its distinctive spirit and atmosphere set Altus apart from any other city.

The first thing that impresses a newcomer to the Oklahoma Great Plains country and Altus is the friendliness of the people. At first, you think the fellow in the pickup truck has mistaken you for someone he knows. Then you begin to think you must be driving a car just like someone very popular in the area. Eventually you realize the people are just friendly, and they wave to you as you drive by.

Altus is the county seat for Jackson County and is located 139 miles southwest of Oklahoma City. Jackson County, one of the state's leading agricultural producers, raises wheat, cotton, cattle, horses and even racing greyhounds in supreme quality and quantity. Nature provided a head start in making Altus one of the most pleasant places to live in this part of the country. Warm, sunny days provide the opportunity to participate in a wide range of activities available at Quartz Mountain State Park, just minutes from Altus.

Altus is one of Oklahoma's most prosperous and progressive cities. At the same time, it is a Southwestern city of unique charm and grace. Altus has grown from a population of fewer than 10,000 residents in 1950 to more than 23,000 today. It offers a good family life and some of the finest game lands in the country. The annual Oklahoma Summer Arts Institute program at Quartz Mountain State Park draws students, artists and performers from across the country. County fairs, rodeos and roundups are all a part of the Altusan's life.

The city also offers a variety of educational opportunities. Its higher education includes a community college—Western Oklahoma State College—and a vocational technical school. Additionally, classes are offered on the base in extension programs from Webster University, Southern Illinois University and Cameron University. And in keeping with the excellent community relations that Altus AFB is famous for, the 443rd Support Group commander is a member of the Altus Board of Education.

A Look Inside

The 443rd AW trains aircrews and special ground support personnel for MAC. The wing also provides

instruction to the Air Force Reserve, Air National Guard, U.S. Navy, Marines, Coast Guard and the air forces of friendly foreign nations. The primary mission of the 443rd AW is providing transition and upgrade training for aircrew members on the C-141 Starlifter and the C-5 Galaxy. In addition to courses for pilots, flight engineers and navigators, instructors teach a number of other courses, such as C-141 and C-5 loadmaster training. The wing also trains aircrews in C-5 and C-141 air refueling techniques using tankers from SAC.

The 340th Air Refueling Wing is the largest associate unit on Altus. The wing's mission is to be prepared for strategic warfare on the front line of the nation's nuclear deterrent force, to conduct air refueling operations worldwide and to support conventional warfare tasking as directed by the DOD.

The base hospital was established in 1942 to serve students of the flight training school and their families during World War II. As mentioned earlier, after the base was reactivated in 1953, control of the base changed hands several times until July 1968, when the 443rd Military Airlift Wing became the host wing. The hospital was redesignated as the 443rd Medical Group on Oct. 1, 1991.

The first building on the base built solely as a hospital was a frame structure constructed in 1953. A new facility, built across the street from the old one, was occupied in January 1980. The current hospital is a modern, well-equipped and well-staffed medical facility. The two-story structure, designed and built as a 40-bed plant, is now operating 15 beds. Dental services, bioenvironmental engineering and military public health services are conducted from separate buildings located near the main facility. Patients and staff enjoy readily available parking and easy access to medical and dental services.

The 443rd Medical Group offers services to a population of more than 17,000 eligible customers including active duty members and their families, students and retirees. It is not unusual for patients in the Great Plains and Southwest to travel hundreds of miles for the most routine medical care.

Among the staff at the 15-bed hospital are 15 physicians, one physician assistant, one OB/GYN nurse practitioner, a psychologist, a social worker and an optometrist. Physician specialties represented include family practice, internal medicine, general surgery and flight medicine. The staff also boasts the only two residency-trained OB/GYN physicians and two pediatricians in the region.

Locally available are orthopedics, ophthalmology, urology and neurology. The medical staffs at Air Force and civilian hospitals enjoy a good working relationship with each other, regularly consulting back and forth. This rapport exemplifies Altus' excellent community spirit.

Being away from a metropolitan area and without intensive care unit capability, the medical group at Altus AFB frequently refers seriously ill patients, or those requiring more sophisticated evaluations, to larger military hospitals; Fort Sill is 60 miles east, and Sheppard AFB, Texas, is 90 miles southeast toward Dallas/Fort Worth. Wilford Hall USAF Medical Center in San Antonio, Texas, is the major referral facility, and aeromedical evacuation planes stop twice a week at Altus or Fort Sill to pick up and drop patients off.

In the fall of 1990, recognizing the inefficiency of maintaining a 24-hour emergency service, the emergency department at Altus AFB closed in favor of a daytime acute care clinic. After-hour visits are now made to the civilian emergency room under a blanket purchase agreement at no cost to the patient. Altus does enjoy the services of a full-time partnership physician in family practice who caters to family members and retirees, and the mental health clinic has a partnership psychiatrist who comes in once a week. There is also an optometry partner to help treat CHAMPUS-eligible optometry patients.

Practicing medicine at Altus can be a challenge due to limited diagnostic and therapeutic resources, and consultants over a hundred miles away. However, it does have rewards. Staff members quickly learn to rely on each other to manage patients and circumstances that in more populated areas would usually be referred quickly. This builds a sense of self-reliance in the staff that is not often found in other facilities.

Capt. Julio Reyes-Rivera (left), physical therapist for the 443rd Medical Group, provides therapy to strengthen a patient's quadriceps.

The 443rd Medical Group enjoys an extremely harmonious relationship not only with the community, but with the wing. The wing commander and his vice commander regularly visit the medical facilities and know most staff members by their first names. The positive base and community relationship is felt throughout all wing organizations. Base and civic leaders continually strive to foster this harmonious relationship by sponsoring numerous activities that involve both the city and base population, such as the sponsoring of a newcomers banquet by the Altus Chamber of Commerce Committee of 100. At the banquet, newcomers are given a complimentary meal, entertainment and fellowship.

Conclusion

Great Plains hospitality and the quiet beauty of the land beckon dwellers away from the endless hustle and bustle of crowded cities. Even the military physician approaching retirement would feel at home setting up practice in Altus' small-town atmosphere. A move or assignment to Altus could be just what is needed for someone looking for that delicate balance of rewarding work and a moderate lifestyle.

Lt. Col. Ronald E. Wildman is administrator of the USAF Hospital Altus, Altus AFB, Okla. Maj. Stephen T. McDavid is the chief of hospital services at the same facility. The 443rd Airlift Wing public affairs staff also contributed to this article.

***Top:** Family practitioner Capt. (Dr.) John C. Tabb (left) prepares to perform a well-baby check in the pediatric clinic. **Bottom:** Working together, Maj. Stacy L. Lanham-Lahera (right) and Sgt. Terry S. Thomas (left) care for a pediatric patient on the medical/surgical ward.*

Saving Lives Through Bone Marrow Transplantation

Ms. Cynthia T. Jenks

On Jan. 29, 1992, Sgt. Michael Walker celebrated a day that he considers of equal importance to his birthday—the fifth anniversary of his bone marrow transplant. Walker received his successful transplant under the DOD Bone Marrow Transplantation Demonstration Program at Wilford Hall USAF Medical Center, Lackland AFB, Texas. Wilford Hall, the largest Air Force medical facility, is the site of the only bone marrow transplantation unit operating within DOD.

Looking back, Walker recounts some of his experiences with leukemia and the subsequent treatment he received at Wilford Hall. "I remember going into the local base hospital at Davis-Monthan AFB, Ariz., in October 1986 for what was believed to be acute tonsillitis," he said. "From the blood work, they determined that my platelets and white blood cells were dropping. Platelets help the blood clot, white blood cells fight infection and control our immune system, and red blood cells carry oxygen. Our bone marrow produces these different types of cells.

"After a bone marrow biopsy on Nov. 14, 1986, at the Arizona Medical Center, the doctor told me that I had leukemia. I was shocked. He left me with some hope, however, when he mentioned that having a twin brother might help me. Although the thought of death crossed my mind occasionally, I never lost hope that my situation could be overcome. We caught the leukemia in its early stage, and it was something that could be dealt with.

"After one round of chemotherapy, I was referred to the DOD Bone Marrow Transplantation Program at Wilford Hall USAF Medical Center in San Antonio, Texas, for a bone marrow transplant. My identical twin brother, Sgt. David Walker, was summoned from his base in Japan to be my bone marrow donor. I was the eighth patient to be transplanted through the demonstration program."

Maj. (Dr.) Michael Snyder (left) and Darrell Breithaupt, RN, of Wilford Hall observe a bone marrow infusion, which looks like a blood transfusion.

Since 1986, more than 350 transplants have been performed through the demonstration program at Wilford Hall. Transplants are used to treat patients who have diseases in their bone marrow, including leukemia and other diseases in which the bone marrow fails to produce cells normally.

Donor bone marrow for transplants is obtained from different sources; rarely does a patient have an identical twin (syngeneic) like Walker did. The most common source of donor marrow is a genetically matched sibling (allogeneic). The sibling can be of a different blood type and sex as long as the genetic markers match those of the patient. Parents may also be donors for children and vice versa, based upon the match of genetic markers. Unfortunately, only 25 to 40 percent of patients needing transplantation will have an acceptable, matched related donor.

Donor banks have been established to find unrelated donors for allogeneic patients with no family-member match, and patients can sometimes be their own donor (autologous). In the case of an autologous transplant, the patient's own bone marrow is removed and stored in liquid nitrogen before the patient receives radiation and/or chemotherapy to treat their

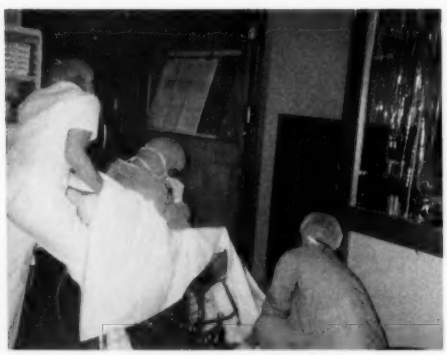
disease. The stored bone marrow can be kept frozen for many years before use, if necessary. When needed, the frozen marrow is brought to the bedside and rapidly thawed in warm, sterile water. Then it is reinfused, much like a blood transfusion.

Patients undergoing syngeneic, allogeneic or unrelated allogeneic donor transplantation usually receive six days of chemotherapy to destroy their abnormal or diseased bone marrow and to make room for the new marrow. On the day of the transplant, the donor is taken to the operating room and given general anesthesia while approximately one liter, slightly more than one quart, of bone marrow is removed from the posterior pelvic bones using a needle and syringe. This accounts for about 10 percent of the donor's total bone marrow and is regenerated within approximately one month.

The donor marrow is strained to remove any residual fat and bone fragments and tested to determine the number of marrow cells and stem cells. After this, the marrow is brought to the patient's room and infused through intravenous tubing much like a blood transfusion. The marrow finds its way into the empty spaces left by the departed bone marrow and starts to grow and produce cells. Within three or four weeks, the marrow is producing enough red and white blood cells and platelets to allow the patient to be discharged from the hospital.

Walker recalls the difficulties of the transplant experience: "With regard to the treatment, I had all the usual side effects of chemotherapy—nausea, vomiting, lack of appetite, loss of hair, etc. I also felt the restriction of isolation in the Laminar Air Flow room."

Laminar Air Flow (LAF) rooms are specially designed using High-Efficiency Particulate Arresting filtration units that remove 99.8 percent of all airborne contaminants from the air entering the room. This surrounds the patient with essentially sterile air. Only sterile products, including food, are allowed into the LAF rooms. The rooms are cleaned and sterilized daily and monitored by routine culturing. Using the LAF environment has significantly reduced the incidence of infection and the amount of time required for the donor bone marrow to graft.



A bone marrow transplant patient enters the sterile Laminar Air Flow environment.

Sgt. Michael Walker (left), a bone marrow transplant (BMT) patient, visit Flow (LAF) room. After a transplant, patients may spend five weeks in th blood counts to go up, enabling their body to fight infection.

"Being in a small, sterile room for four to five weeks, having no privacy and being bored and sick makes you act a little crazy," said Walker. "What worked to keep my spirits up was constant encouragement from the staff and the invaluable support I received from my mother. My mother was my strength.

"You definitely need a friend or loved one with you during this time. Joking with the physicians and nurses and clowning around also helped me to blow off steam. Waiting for your blood counts to go up can be agonizing when you've spent four weeks in strict confinement. I spent most of my day watching soap operas and game shows, using an exercise bike and visiting with my mother. Focusing on the future also helped me look beyond the current situation.

"I remember when the doctor told me that my blood counts were high enough for me to leave isolation and move to an apartment in San Antonio," continued Walker. "I felt free again—ready to spread my wings and fly. I was on my way to recovery. Adjustment to the outside world was a bit difficult. I felt all burned out. I had to gain weight and attend physical therapy sessions to get my strength back. I also felt very self-conscious wearing a mask to protect me

, visits with volunteer Nancy Kramer while living in the Laminar Air in the LAF room waiting for the donor marrow to graft and for their

from germs and waiting for my hair to grow back. People on the outside often looked at me like I was an alien; they didn't understand the reason for my mask."

Because Walker had a syngeneic transplant from his identical twin brother, he was considered at less risk for potential complications than most bone marrow transplant patients. His recovery was also faster than normal, and he was able to return to work earlier than most. Typically, active duty bone marrow transplant patients are medically retired or told not to return to work or school for a minimum of one year after the transplant. Knowing that he could return to work in some capacity kept Walker going.

"Luck was on my side by my having a twin," he said. "I was able to return to limited duty in April 1987, and in July 1987, I returned to my regular duties as an aircraft maintenance specialist. I wanted to go back to a normal routine and contribute to the mission. My supervisor and co-workers were very supportive. They knew what I had been through, but they treated me like a normal person when I returned. They now come to me with questions about chemotherapy, etc., when they have friends or family members diagnosed with cancer.

"People's greatest misconception about leukemia is that it's inherited or contagious. The reality is that you don't have to be 55 or older to get cancer; life can stop at any time." Five years later, Walker has put his transplant experience into perspective. "I feel good. I'm living proof that leukemia can be overcome."

The Wilford Hall transplant team can be proud of its accomplishments over the past five years. Transplants have been very successful and have been performed at significant savings to the patients, their families and the government. Average costs for allogeneic and autologous bone marrow transplants within the civilian community often run in excess of $250,000 per patient. The procedure is much less expensive when performed in a setting where staff salaries are not dependent on professional billing and other considerations.

Not quite two years after his life-giving transplant, Sgt. Walker graduated from NCO leadership school.

At this time, about one-half of the more than 350 patients receiving transplants at Wilford Hall are still surviving. The 50 percent success rate ranges higher and lower depending on a variety of factors that can influence outcome, including disease status and current medical problems at the time of the transplant. Bone marrow transplants at Wilford Hall will continue saving lives like Walker's by serving active duty members, retirees and families of all branches of the uniformed services.

Note: For information about becoming a bone marrow donor, please contact the patient referral coordinator at Wilford Hall USAF Medical Center, (512) 670-7080.

Ms. Cynthia T. Jenks is a medical social worker for the bone marrow transplant unit at Wilford Hall USAF Medical Center, Lackland AFB, Texas. Sgt. Michael Walker is an aircraft maintenance specialist crew chief at Davis-Monthan AFB, Ariz.

Eglin Meets Home Health Care Needs

Community Health Nursing Offers Patient Care Alternatives

Maj. Valerie A. Cardona, NC

Community health nursing at AFSC Regional Hospital Eglin, Eglin AFB, Fla., represents a new and expanding service in Air Force medical care. As Eglin's community health nurse, I have the opportunity and challenge to oversee discharge planning care for a whole spectrum of patients waiting to leave the hospital. Helping patients and families identify their needs and actively participating in carrying out their health care is a rewarding, although sometimes frustrating, experience.

Overview of Community Health Nursing

Everyone wants to go back home following hospitalization, but many times, no family member is available to assist, or patients simply do not have the energy or physical strength to take care of themselves, even though their spirit is willing. This is where the community health nurse comes in, assisting patients by assessing, providing and arranging necessary services for them on either a long-term or short-term basis.

Insurance and financial stability are very important factors in finding appropriate care. A small percentage of the patients have Veteran's benefits, and the remainder have Medicare, Medicaid or CHAMPUS coverage. Often clients are unaware or misinformed about their insurance coverage, or simply have no coverage because they believe that "Uncle Sam was supposed to take care of us."

Eglin's community health program has a typical client population consisting of retirees, active duty members and their families. Thirty percent are cancer patients under age 65 and their families. Forty-five percent are 65 years of age and older who have had strokes, cardiac surgery, elective orthopedic procedures or multiple medical problems. The remaining clients are children with respiratory problems or multiple disabilities, single pregnant adolescents and a few active duty troops.

Each client is an individual with different ideas, ethnic values, personal needs and goals. Discharge planning provides a safe environment and blends the patients' desires with their ability to meet the financial obligation of their decision. Alternatives to going home from the hospital include using home health care services, moving in with a family member, being placed in a nursing home, entering a hospice or going to a rehabilitation facility.

To ensure continuity of care, nursing staff and a volunteer at the AFSC Regional Hospital Eglin, Eglin AFB, Fla., discuss the various conditions of patients they will see during the day.

Maj. Valerie Cardona (second from right), Eglin's community health nurse, and Maximum Living Potential Team Red Cross volunteer Richetta Suydam (right) conduct a discharge planning conference with the Jamison family.

Ms. Richetta Suydam prepares to escort this retired master sergeant home after a stroke.

Home Health Care Services

Most of the clients for whom we arrange home health care services are 65 years old and up. Gerontological nursing, the care of elderly persons with chronic or long-term illnesses who possess multiple problems—social, financial, psychological—besides their physical maladies, grows more important as the aging population continues to increase in number and proportion. In fiscal year 1989, 874,975 DOD beneficiaries worldwide were 65 years old and over, making up 9.6 percent of the total DOD population. Based on that figure, a projected 962,928 DOD beneficiaries will be 65 and older in fiscal year 1999, 11.5 percent of the total.

CASE STUDY 1: Ms. A., a 74-year-old living in a one-bedroom apartment in a retirement village, has taken care of herself well since her husband's death last year. Recently, however, visits to her physician have increased, and she has complained of constant diarrhea, weakness and fear of falling. Following a medical evaluation, home health care nurses and nursing aides now assist Ms. A. with activities of daily living for five or six days a week. Her blood pressure, blood sugar and vitamin B injections are assessed by the visiting nurse who reports her findings to Ms. A.'s physician. This communication and cooperative effort among the physician, nurse and client are responsible for Ms. A.'s decreasing admissions to the hospital.

To the elderly patient, living at home is a daily challenge; being mobile and performing feeding, dressing, bathing and toileting are energy-consuming activities that the younger generation takes for granted. The greatest dread of the elderly wishing to remain independent in their homes is the inability to contact someone for help when they fall, become ill or sustain an injury. Coordinating with community services that support individuals at home in familiar surroundings with a daily routine helps allay this fear.

CASE STUDY 2: Mrs. B. has no relatives or immediate family members, but she has managed to remain at home. She is on continuous oxygen, and because of her declining health, she can no longer cook, clean or shop for groceries. Community resources include Meals-on-Wheels delivered at noon, homemaker service through the Council on Aging and aides provided from home health care services six times a week for bathing, hygiene and light household duties.

Most home health care for the elderly takes place in the community. Recent research shows that adequate social supports improve the physical and mental health of the elderly (1). Social supports include relationships to "significant others," friends and relatives, and the frequency, quality and types of social interaction with the patient. These care givers can be a family member, neighbor, friend, hotel manager, paid attendant or paid homemaker who provides support through financial aid or friendship. These care givers can offer temporary respite or ongoing, total physical and emotional support for an ill or dependent elderly person, maintaining them in their own familiar home environment.

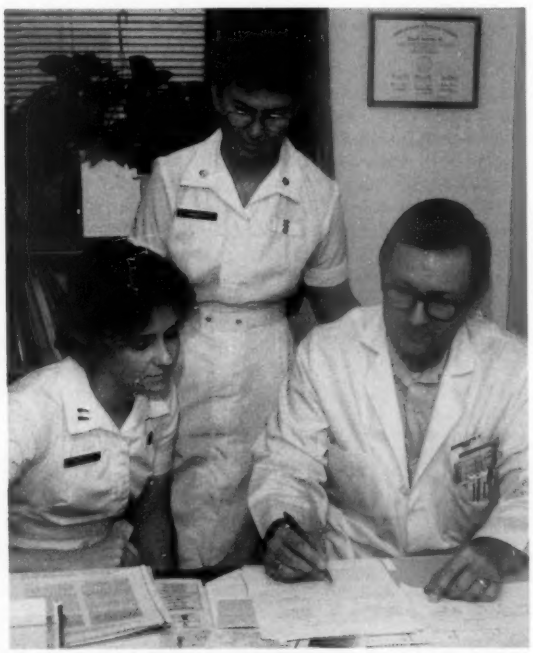
Clients may choose to move in with, or to continue living with, a family member and combine home health care services with family care. Accepting home health care along with medical equipment and social services can be a fearful experience for patients and their families, who become the main care givers. Clients may go home on oxygen or may need wheelchairs or walkers. Some family members even learn suctioning skills or how to give injections.

Nursing Home Care

Sometimes the care needed by a patient cannot be provided at home, either by professional services or family members, for various reasons. Most patients facing this situation are elderly, and health care programs for the elderly have been expensive, poorly designed and somewhat ineffective (2, 3). Extended families with working spouses cannot always afford to stay home and administer care to their parents or spouse in these times of fiscal constraints. Care givers usually have their own family responsibilities, and asking a son, daughter or sibling to care for a loved one is not always the right or practical solution. Additionally, their absence does not imply lack of support or love. In some cases, a patient may have no immediate family to turn to at all. In these situations, nursing home care may be recommended.

CASE STUDY 3: Ms. C., a 76-year-old with chronic pulmonary lung disease, can no longer cook for herself. Heating food in her microwave is even becoming unmanageable, and getting dressed in the morning causes shortness of breath. Ms. C. is "sharp as a tack" and feisty, and she verbalizes her fear of nursing home placement. Unfortunately, Ms. C. is unable to care for herself at home. Several episodes of shortness of breath have led to multiple hospitalizations. Her savings are gone, and she is unable to pay her bills. She believes that a nursing home is where people go to die. Ms. C. has no immediate family, and she needs someone to monitor her 24 hours a day. The only safe choice for her that provides this service is a nursing home.

Many times a client begins with home health care services, but because of declining health and unavailable family support, a nursing home becomes a sound option. Approximately one-fourth of all older Americans will spend part of their lives in nursing homes (4).



Oncology nurse Capt. Amy Kelly (left), Maj. Valerie Cardona and oncologist Col. (Dr.) Rene Ledbetter (right) discuss a case before discharge planning takes place.

Hospice Care

Any person, regardless of age, who has a terminal illness and is no longer undergoing curative therapy, usually chemotherapy, for the primary disease qualifies for hospice care. The person must be under the care of a physician who continues to assume responsibility for medical care and is willing to affirm that the patient has six months or less to live. There must also be a care giver in the home who is responsible for learning necessary health care skills and basic nursing tasks.

CASE STUDY 4: Thirty-three-year-old Mr. D.'s cancer has recurred. Retired from active duty and receiving VA benefits, he has elected to discontinue his chemotherapy treatments and has been independent at home. However, over the past six weeks, Mr. D.'s health has declined secondary to the progressing cancer, and his wife has taken leave-of-absence from her job to be with him. Mr. D. is unable to walk or even get up without assistance, and he gets intermittently confused. Staying at home alone is now a question of safety. Hospice has been contacted to make Mr. D. comfortable in the time he has left and to support his wife and family. Electric beds, bedside commodes and IV fluids for administering pain medication are now a common sight in Mr. D.'s home.

Every discharge case is different, and the patient's particular situation determines the requirements for care, such as the setting for care or the use of available health care agencies. The hospice approach shifts from curative care to palliative, in which physical comfort and pain control are the priorities. Hospice home health care includes counseling services, volunteer assistance, respite care, support at the time of death and bereavement follow-up. When physical symptoms are managed well, the dying may have the emotional energy to prepare for death, which, in turn, helps the family prepare and grieve.

Many hospice clients are cancer patients. Cancer patients and their families need time to digest the cancer diagnosis, understand the prognosis and discern among the treatment options. They usually ask, "What did I do wrong?" or "I don't smoke or drink; why is this happening to me?" They must also learn the new medical jargon, such as primary site, chemotherapy and neutropenia. It is good for the community health nurse to meet all of the cancer patients who are admitted to the medical facility just to let them know that someone is available for questions, clarifications and concerns.

The community health nurse is a liaison between the clients and their families, helping everyone meet the challenge of having cancer or having a loved one with cancer. Col. (Dr.) Rene Ledbetter, Eglin's oncologist, Capt. Amy Kelly, the oncology nurse who administers chemotherapy, and I work closely to meet client and family needs.

Thirty percent of Eglin's community health clients are, like Ms. Lydia Radike (middle), cancer patients under age 65.

Respite Care

Patients are not the only ones who need to be taken care of. With patients' being released earlier from the hospital, care givers today are doing tasks previously managed in acute care settings, and for the care giver who has been carrying a heavy physical and emotional burden providing care, respite becomes a primary consideration.

Respite care, medical or social in nature, may be based in the home or in a facility. The service may range from two to four hours once a week or be two or more weekends of continuous 24-hour care (5). Insurance rarely pays for respite care, and unless volunteer services are available through a church or support group, the family or client is responsible for the cost.

Eglin has the privilege of housing a group of volunteers, the Maximum Living Potential Team (MLPT), and a 72-hour, in-house respite program. The MLPT's purpose is to always have someone available to assist families during an initial crisis. The team, a group of 52 trained retiree and active duty volunteers, provides a listening ear, a hand to hold or simple reassurance that someone cares.

MLPT volunteers work under the auspice of the Red Cross office and know hospital policies as well as how to contact professional assistance. The majority of our in-house respite users are cancer clients admitted by our oncologist or the attending internal medicine physician. The purpose is to offer the care givers a chance to rest and take time out for themselves,

knowing their loved ones' medical and emotional needs are being met.

Pre-Planning for Future Health Care

The importance of pre-planning for possible disability or incapacity cannot be emphasized enough. Families need to be ready to make knowledgeable and quick decisions confidently in a health care crisis situation. These situations can come up unexpectedly and can quickly overwhelm an unprepared family.

CASE STUDY 5: Cindy is the daughter of Mrs. E., a 60-year-old women admitted to our emergency room because she was having trouble breathing. She was placed on a ventilator and admitted to our intensive care unit. Her husband, a stroke patient of several years, is confined to a wheelchair and living at home. His mind is sharp, but he cannot communicate verbally, and he needs assistance with activities of daily living.

Cindy appeared in my office requesting someone to live in with her father and mother when Mrs. E. recovers. Finances became the major question. Cindy does not know whether Mr. E. has Veteran's disability or whether her parents have any kind of insurance. I gave her a list of items to gather, hoping to find a service-connected disability in her father's discharge paperwork. I also asked Cindy to find Mr. E.'s Medicare card.

We sat down and discussed options for her parents. Home health care is paid by Medicare B and supplemental insurance. Her mother's health may improve, but once discharged, she will not be strong enough to help her husband like before. I suggested they have a family meeting with all the children to discuss who could move in with mom and dad on a permanent basis. Other options are nursing home placement for Mr. E., possible with the VA, or a private-pay nursing home where costs vary from $1,800 to $2,500 a month.

To keep their patients informed, Cardona and Kelly look up lab and test results with family practice resident Capt. (Dr.) George Barron.

Pre-planning involves making some major financial, ethical and legal decisions now. Spouses and family members should discuss with each other their wishes regarding health care alternatives. This takes, first of all, becoming aware of those alternatives, doing some homework. Legal advice should also be sought to find out about powers of attorney, trusts, living wills and advance directives. Life insurance policies need to be reviewed. Is the policy for whole, universal or term life insurance? Loved ones can be protected by a pre-planned funeral, but caution should be used when shopping around and offering prepayment.

Calling a family meeting to discuss decisions made and alternatives chosen is important. Talking with family members may not be easy, but it is in everyone's best interest and will avert an unmanageable dilemma if decisions regarding care are left up to the family in a time of crisis.

Conclusion

As the health care needs of society change, innovative programs continue to take shape, and advances in technology result in improved methods of diagnosis and treatment of illness. In this changing environment, patients and their families desperately need someone to support them during a health crisis who understands their situation and the programs available to them. They need someone to coordinate services for them and to speak on their behalf, offering valid options of community resources and appropriate referral. Community health nursing provides that vital "someone."

Maj. Valerie A. Cardona is the community health nurse at AFSC Regional Hospital Eglin, Eglin AFB, Fla. She is also the discharge planning consultant for the Air Force surgeon general.

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The *Digest* Interviews

Lt. Gen. (Dr.) Alexander M. Sloan

The *Digest* interviewed Lt. Gen. (Dr.) Alexander M. Sloan, the Air Force surgeon general, on January 23, 1992. In his interview, Sloan examines key issues and challenges facing the Medical Service at the beginning of his term, and he discusses the direction that Air Force medicine will take in the future.

Digest: What are some major areas or issues that you plan to focus on during your tenure as surgeon general?

General Sloan: We are spending a lot of time analyzing the results of our experiences in the Gulf a year ago, determining what went right and what we think needs some improvement. We are trying to decide where we will focus our energy and priorities, in the near term as well as in the distant future, and how that will fit in with the future of the Air Force.

The Air Force is moving to a smaller, more mobile, more flexible structure, worrying more about regional and low-intensity conflicts than general war in Europe, which is now a very remote possibility. The Gulf War was an example of a type of conflict that the Air Force must be prepared for, and as we change with the needs of the Air Force, we want to apply the medical lessons that we learned last year.

In the next year or two, we will also spend a lot of effort implementing the coordinated care program. It will be a challenge that we think we are up to. We have the policy guidance from the assistant secretary of defense for health affairs, Dr. Enrique Mendez, and we hope to get started as soon as possible. We hope to begin the program this year at approximately 30 Air Force bases, maybe more, and have the program fairly well completed at our other bases by 1995.

We have a lot of work to do in the force drawdown area with base closures, deciding how we will provide health care transition in areas where we will be closing or phasing out medical facilities. We think we can keep the impact of closures down to a moderate degree. We feel some urgency to provide more than just a standard CHAMPUS approach, particularly where we have large numbers of retirees and their families. Where it can be done, we will arrange for networks with simplified access and perhaps some reduction in standard charges by participating physicians.

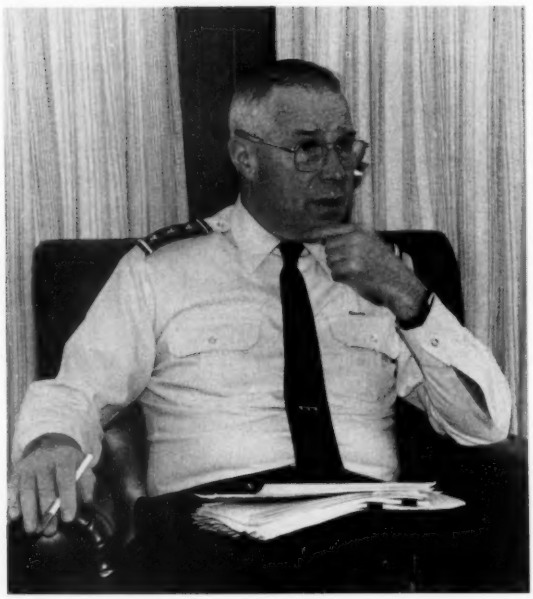
We are going to continue our emphasis on operational medicine, our support to the line of the Air Force. We are going to spend a little more effort on situational awareness and research into that aspect of aerospace medicine. Human factors in accidents, and what we can do to minimize them, will continue to get some high attention also.

Finally, we are going to aggressively pursue across-the-board implementation of the principles of total quality management.

Digest: You mentioned analyzing the results of the Gulf War. Do you foresee changes in medical readiness training as a result of medical performance in the Gulf?

General Sloan: Yes. The idea behind medical readiness and medical readiness training is that we keep sight of our primary mission. Our primary mission, the thing that separates us from any other medical care system, is the responsibility that we have to pick up and go someplace quickly and effectively, responding to a crisis or contingency. We have kept our eye on that part of our responsibility well.

However, I anticipate some changes in our future training efforts. We will tend to focus more on certain



aspects of military medicine, such as biological and chemical warfare, that we were able to manage reasonably well in the Gulf War but could manage better. We think we should spend more time on those in our training and education curricula.

We particularly want to do a better job of training people on the actual equipment that they are going to use. Although we were able to deploy our air transportable hospitals and set them up in quick order, we frequently found our folks, specifically some of our reservists, actually using equipment that they were not familiar with. It just takes a little longer to do that, and they were up to the task, but it makes sense to pay more attention to that detail in training. We are also examining the prospect of training the active duty and reserve folks together.

Another important thing we will be working on as a result of the outcome of Desert Storm will be mobilization issues as they pertain to the reserve components. There is a significant amount of work to do in the policy and procedures area, and we also need to have better tracking of secondary specialties to match mobilization unit assignments with requirements.

Let me take this opportunity to commend the Guard and Reserve for their significant contributions during Operation Desert Shield/Storm. One-half of the Air Force medics who went to Europe and Southwest Asia by February 1991 were Guard and Reserve folks. We could not have managed at home or abroad without them, and that is always the case. They are an invaluable asset to our Medical Service, and we could not have done it without them.

Digest: You mentioned the coordinated care program as a major focus for your term. Specifically, what will the role of Air Force managed care be in the recently established DOD coordinated care program?

General Sloan: We are charged with the delivery of the health care, with the establishment of the programs at our hospitals and clinics. The medical facility commander will be the overall manager of the program in various geographic locations. We will have to enroll folks in the program following the DOD guidance, and we will have to arrange networks and enter into agreements with other organizations or groups.

We will manage health care options so that our patients get their care from the best places, or at least, we will recommend how they can get the best care, whether in our facilities or someplace in the civilian community. We are expanding our own services to include specialized treatment facilities, such as Wilford Hall with its high-quality transplantation programs.

We will be the ones responsible for the care, for evaluating it and making recommendations for improvement. We will have to keep track of how much it is costing us and get the best trade-offs for the value of our dollars. Yet, at the same time, we must offer the greatest possible access and high-quality care to our patients.

Digest: What are some major challenges that you believe Air Force medicine will face over the next few years?

General Sloan: Foremost in people's minds is whether there will be adequate dollars, people and facilities to take care of all of our patients. There is some degree of uncertainty about whether the medical

benefit will remain as robust as it is now. Personally, I am optimistic that it will—we have a high-quality system that can withstand any scrutiny. We are as good at containing costs as anybody else in the medical business, and better than most.

Although significant changes will occur in DOD, in terms of people, equipment and dollars available to do our job of national defense, I think we in the Medical Service will still be able to discharge our responsibilities and commitments to the Air Force family. This is probably the number-one challenge and concern of our people.

The next biggest challenge is implementing a total quality management (TQM) approach at every level of every installation. We have a start, but it is not a simple thing to do. Implementing such a program demands a lot of time, effort, commitment and training, but it is worthwhile and the medical leadership is uniformly committed to doing it. Air Force Logistics Command (AFLC) has already made great strides in the right direction with their "QP4" TQM philosophy—Quality People, Process, Performance and Product. They were presented with the President's Award for Quality in 1991, the highest recognition for improvement in quality and productivity in the federal government.

Wilford Hall has applied the principles of TQM with tremendous success. They performed a comprehensive study of their X-ray system and revolutionized the process from start to finish, cutting turnaround time for transcription of radiology reports from an average of 10 days to between one and three days. Wilford Hall also used TQM to greatly increase the efficiency of their operating room use.

We also have some complex challenges in automation. We need modern information systems to assist with the day-to-day work in our hospitals and clinics. How we will get there is not yet clear. The Composite Health Care System is in the operational test and evaluation process, and we hope that we will be able to modernize and deploy that system to all of our facilities in the next few years to assist them to some degree.

Digest: Can you discuss the impact on the Medical Service of the consolidation of medical resources under the assistant secretary of defense for health affairs?

General Sloan: It is a little early to tell. At the present time, we do not see any significant impact. The services will continue to prepare their programs for the out-years and will continue to submit budgets to the assistant secretary of defense for health affairs. It is a little early to tell how requirements will be handled when there is not enough money for them or whether we will have relatively the same amount of money to carry out our programs. Right now, though, we cannot detect any dramatic changes.

We predict and hope that any changes will be relatively transparent at the base level. We are, however, striving to allocate the proper amount of money to each major command, and thence to each facility, at the beginning of the year to get them through the year. They would know up front the dollars they have, and if we can do that, it will simplify our process somewhat. Now we typically have some element of incremental funding throughout the year.

Digest: What about the TAC/SAC/MAC disestablishment? Will that be noticeable at the base level?

General Sloan: There will be some changes, some movement of people from one headquarters to another. Transition teams have been formed to do all of that, ensuring a smooth and orderly hand-off of some responsibilities from SAC to Air Combat Command and Air Mobility Command. We have some experience from the disestablishment of AFLC and AFSC and the formation of Air Force Materiel Command, which has been helpful.

By and large, this should also be relatively invisible to our facilities and patients. There will be changes in squadron patches and some new missions at certain bases, which may bring a different type of airplane, but we would expect all of that anyway as people move around.

Digest: Will the reorganization of the surgeon general's office have any impact at the base level?

General Sloan: There should not be a lot of difference to the folks in the field. They will notice that some names will change; however, we will continue to cover the same areas as we have in the past. One area of authority that we are not retaining in the surgeon general's office is the structuring of our hospitals. In an effort to decentralize, or push down, authority, we have decided to delegate approving authority for hospital organizational structure to the major command surgeons. They will inform us about how they are going to do that and how they will follow up to see whether it works or not, but it will be their ball game.

Digest: How would you describe the quality of Air Force medical care?

General Sloan: It has never been better. Our people are well-trained. They do exceptionally well on examinations when we compare how they do with the performance of their civilian counterparts. For example, between 1985 and 1990, those in our diagnostic radiology residency program had a first-time specialty board pass rate of 96 percent versus the nationwide statistic of 54 percent. During that same time frame, our general surgery residents had a 100 percent first-time pass rate while the nationwide rate rested at 69 percent.

We do exceptionally well, in the highest percentiles, when national accreditation and survey people come by and look at our facilities and our programs. We have spent a lot of time, effort and money on peer review by external civilian organizations, and the results have been quite gratifying. From December 1987 to December 1990, the Civilian External Peer Review Program reviewed 33,688 inpatient cases at 85 Air Force hospitals worldwide and found that 97 percent of the cases met or exceeded the set criteria. We are convinced, and we have the data to prove it, that we are practicing high-quality medicine our patients can be proud of.

Digest: Taking a broad look at Air Force medicine, how do you feel that its emphasis has changed over the past 10 years, or what direction do you think Air Force medicine will take in the next 10 years?

General Sloan: Certainly we have begun, and will continue, to place more emphasis on preventive medicine and health promotion, the public health aspects of medical care. That is, on trying to avert and avoid things that cause disease rather than taking care of the disease once it occurs.

We have had some considerable success in that, both in a reduction of smoking and alcohol abuse. After we introduced smoking cessation programs in 1986, the number of Air Force smokers fell from approximately 231,000 in 1985 to about 165,600 in 1988, roughly a 28 percent reduction. Also, active duty driving-while-under-the-influence citations decreased from 3,654 in 1986 to 2,076 in 1990, a 43 percent decrease in four years. We plan to continue that emphasis.

Another concrete example of what we are doing in the way of preventive medicine is our development of a preventive services center in San Antonio, Texas. Combining the strengths of clinical preventive medicine at Wilford Hall, occupational medicine at USAF Clinic Kelly and aerospace medicine at the Human Systems Division, we intend to create a center to deliver preventive medical services, develop and provide preventive medical education and evaluate preventive services. Specialty advisory groups will be formed from the cooperating agencies within the center to solve problems as delegated by a coordinating council. This should turn the emphasis in the proper direction for the future.

In the family advocacy arena, our concentrated research has begun to help us identify more effective interventions, and we have been focusing on those to provide better and more timely service to abusive families. The extra time we save can be spent providing prevention services to individuals and families who have not yet become abusive. Preventing problems that lead to family violence is much preferred to having our medics and police respond after the damage is done.

Clearly, the way we deliver health care through managed care will significantly change the approach across the Air Force and will cause visible differences for our patients that we hope will be quite positive. We think it will be simpler to get care, and we will maintain or improve the quality of that care. Although presently we generally have a high degree of satisfaction with our services, we anticipate that satisfaction should and will improve. We are looking for delighted, not just satisfied, patients.

We will be placing increased emphasis on the environment. The medical ramifications of environmental issues will continue to occupy our efforts, and probably increasingly so as we move through the 1990s. Occupational medicine will also most likely receive additional attention in that regard.

Digest: Do you have a personal message for the men and women of the Air Force Medical Service?

General Sloan: I am looking forward to great things ahead. We have never been healthier, stronger or better able to do our job—we have proven that as well as anyone could. And, as the future brings changing needs and increasing challenges, I know that we will grow even better by learning to scale new heights together.

Digest: Thank you, General Sloan.

Professional Board Certifications

American Board of Family Practice

Maj. Dirck A. Curry, 51st Medical Group, Osan AB, South Korea
Capt. Eugene S. Justus, 51st Medical Group, Osan AB, South Korea
Capt. Mario A. Lanza, 51st Medical Group, Osan AB, South Korea

Capt. Matthew B. Stevens, 416th Strategic Hospital, Griffiss AFB, N.Y.
Capt. Donald F. Thompson, 40 TAC Group Clinic, Aviano AB, Italy

American Board of Internal Medicine
Capt. Kathryn F. Hobbs, Air Force Institute of Technology, Wright-Patterson AFB, Ohio
Capt. Thomas R. Johnson, Air Force Institute of Technology, Wright-Patterson AFB, Ohio
Capt. Gustavo Serrano, Air Force Institute of Technology, Wright-Patterson AFB, Ohio

American Board of Obstetrics and Gynecology
Maj. Mark C. Bidwell, Air Force Institute of Technology, Wright-Patterson AFB, Ohio

American Board of Ophthalmology
Capt. Wendall C. Bauman, Air Force Institute of Technology, Wright-Patterson AFB, Ohio
Maj. David K. Scales, Air Force Institute of Technology, Wright-Patterson AFB, Ohio

American Board of Psychiatry and Neurology, Inc.
Capt. Anthony A. Amato, Air Force Institute of Technology, Wright-Patterson AFB, Ohio

American Board of Radiology
Capt. Tracy L. Samples, Air Force Institute of Technology, Wright-Patterson AFB, Ohio

Amerian Board of Surgery
Maj. Steven P. Cummings, Air Force Institute of Technology, Wright-Patterson AFB, Ohio
Maj. Wyatt C. Fowler, Air Force Institute of Technology, Wright-Patterson AFB, Ohio
Maj. Michael R. Probstfeld, 42nd Strategic Hospital, Loring AFB, Maine

American College of Healthcare Executives
Maj. Stephen A. Giesecke (Fellow), 93rd Strategic Hospital, Castle AFB, Calif.
Maj. Michael J. Murphy, Headquarters Strategic Air Command, Offutt AFB, Neb.

American Society of Clinical Pathologists
Capt. Mark E. Deysher, 82nd FTW Hospital, Williams AFB, Ariz.

National Certification Corporation of the Organization for Obstetric, Gynecologic and Neonatal Nurses
Maj. Rebecca A. Matta, 42nd Strategic Hospital, Loring AFB, Maine

Surgeon General's Office Welcomes New Director

Col. Jerry W. Davis was selected as the new director of Biomedical Sciences and chief, Biomedical Sciences Corps, as of Dec. 14, 1991. He replaced Col. D. Dean Falconer, who retired.

Medical Service Awards

Federal Health Care Executive Special Achievement Award

Capt. David E. Womack, coordinated care manager for Headquarters, Strategic Air Command, Offutt AFB, Neb., received the 1991 Federal Health Care Executive Special Achievement Award. The award was created in 1987 by the American Hospital Association's (AHA) governing council of the federal hospital constituency section. Womack has distinguished himself through significant achievements contributing substantially to the mission of the federal health care system. The AHA recognized Womack at their annual convention in Anaheim, Calif.

Federal Nursing Service Award

Capt. Michaela R. Shafer's essay, "The Effect of Increased Atmospheric Pressure on Glucose Reagent Strip Accuracy," won the Federal Nursing Service Award given by the Association of Military Surgeons of the United States. The award is presented annually to a professional nurse from the Federal Nursing Services who submits an essay on the results of a study or a scholarly paper that has an impact on nursing. Shafer, chief of hyperbaric nursing services at the Armstrong Laboratory, Brooks AFB, Texas, is considered the international expert on hyperbaric nursing issues. She is the consultant to the Air Force surgeon general on hyperbaric nursing and speaks nationally on this new nursing subspecialty.

Ray E. Brown Award

Col. Frank G. Rohrbough, retired chief of the Medical Service Corps, was given the Ray E. Brown award by the Association of Military Surgeons of the United States (AMSUS). This award was established in 1975 by the AMSUS executive council to honor Brown who played a major role in health care administration training. Rohrbough was selected to receive the award for his outstanding accomplishments in federal health care management. A plaque and honorarium were presented to Rohrbough in September at the annual AMSUS meeting.

Young Federal Health Care Administrator Award

Maj. Kevin P. N. O'Shea received the Young Federal Health Care Administrator Award from the Association of Military Surgeons of the United States (AMSUS). O'Shea is the administrator of the Goodfellow Technical Training Center Clinic, Goodfellow AFB, Texas. The award recognizes O'Shea for his contributions to federal health care management as an American College of Health Care Executives affiliate. O'Shea was presented with a plaque and honorarium at the annual AMSUS meeting, commemorating his selection.